Rhodora

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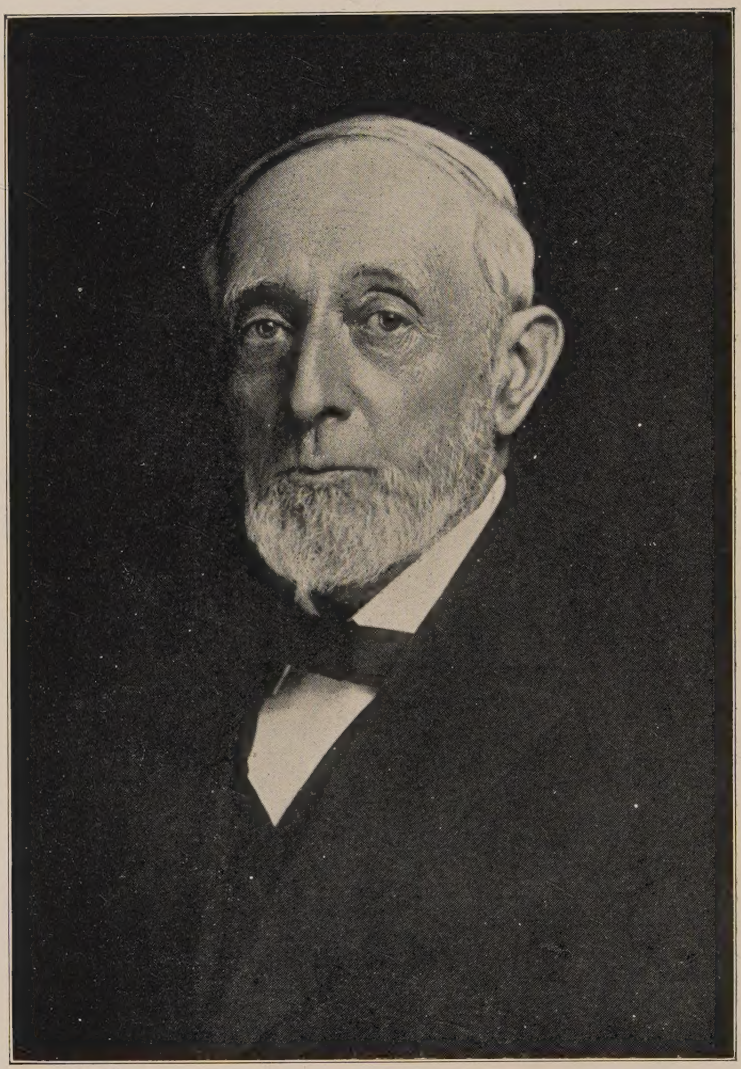

Very sincerely yours,
E. J. Hill.

Rhodora

JOURNAL OF

THE NEW ENGLAND BOTANICAL CLUB

Vol. 19. April, 1917. No. 220.

REV. E. J. HILL.

AGNES CHASE.

(With portrait.)

ELLSWORTH JEROME HILL was born at Le Roy, New York, December 1, 1833, the son of a farmer of colonial stock from Connecticut. His alert mind and eagerness for knowledge made the most of the local facilities for education, while a love of natural history and of reading led to the study of geological works and of the classics. At 19, when about prepared to enter college, he was seized with an affection of the knee, causing lameness. He never afterward had good health, all that he accomplished being in spite of the handicap of pain and weakness. It was during this first period of lameness that he began the study of botany. His first effort to walk out of doors on crutches was made to secure from the orchard a few early spring flowers which he identified by Wood's Botany. During the summer he thus collected and studied some two hundred specimens that are still preserved in his herbarium. The following year he went to Mississippi, and there taught in a female seminary at Grenada and later in a preparatory school for boys. After three years, much improved in health, he returned to New York where he taught for two years. In 1860 he entered Union Theological Seminary, graduating in the class of 1863. He then married and went to Homewood (near Chicago), Illinois, as pastor of the Presbyterian Church. In 1869 hip disease developed rendering him lame for several years. In consequence he resumed teaching, first in the high school of Kankakee, Illinois, for four years, then in the Englewood high school, Chicago, for eighteen years.

He made rich collections in the sand barrens and swamps about Kankakee, discovering *Sphaeralcea remota*, still known only from the island in the Kankakee River where he found it. Most of these collections were made while he walked on crutches or with two canes. He told me that he carried his vasculum over his shoulder and a camp stool with his crutch or cane in one hand. To secure a plant he would drop the camp stool, which opened of itself, then he would lower himself to the stool and dig the plant. He recovered from his lameness but often suffered acute pain from cold or wet or overexertion. But this did not deter him from making botanical trips that would have taxed a more robust man — in the dunes I have seen him tire out more than one able-bodied man. While teaching in Chicago he spent many of his vacations on extended trips, visiting the Saguenay region in Quebec, the Menominee iron region in upper Michigan, and other places about Lake Superior, and in northern Wisconsin.

Mr. Hill made a critical study of several difficult genera, particularly Potamogeton, Carex, Quercus, Prunus, Salix and Crataegus. The last ten or twelve years were mostly devoted to the study of mosses. Unfortunately his modesty often prevented his publishing his conclusions. His note-books, filled with detailed observations and comparisons, contain full descriptions of several species written long before they were published by others. His bibliography, of 162 titles, shows the range of his botanical interest. He was a correspondent of Dr. Gray and Dr. Watson, contributed specimens and critical notes to Dr. Morong for his work on Potamogeton, and made extensive field studies of Crataegus for Prof. Sargent. It was characteristic of him to give unsparingly of his knowledge to further the work of others, great or small, from critical notes for Prof. Sargent to helping me with a puzzling Carex or elucidating the German-tinged Latin of some of Kunth's descriptions of grasses. He amassed an herbarium of some 16,000 sheets, much the greater part being his own collections, and an exceptionally fine botanical library.

The study of geology he carried on simultaneously with that of botany and the relation of the two he impressed on his students. Before the word ecology was invented he was calling our attention to the zones of vegetation about the sloughs in the dune region of northern Indiana and pointing out to us the successive stages by which vegetation converted the sloughs into dry land. He possessed the vision of plant life as a whole, seeing it as an active factor in building and shaping the surface of the earth.

In 1888, because of poor health and failing eyesight, he gave up teaching, but became the more devoted to botany. In the '90's his health improved and for several years from early spring till late fall he made from one to three or four excursions a week in the Chicago region, studying oaks and Crataegus particularly. It was my good fortune to accompany him on many of these excursions, serving, he used to say, as eyes for him. Many species hitherto unknown for the region were discovered in these days and his joy over them was no less than mine. His enthusiasm and his love of beauty were as fresh as a boy's, while his mature judgment and ripe knowledge made it a rare privilege to be in his company. He never lost his early love of the Greek and Latin classics and often he had a copy of Virgil in his pocket to read aloud during the resting periods.

The last ten or twelve years Mr. Hill devoted to the study of the mosses of the Chicago region. He left in manuscript detailed descriptions of 133 species. He put the manuscript into my hands and after it has been copied it is to be hoped the work may be published. His herbarium has been purchased by the University of Illinois.

Mr. Hill died January 22 at his home in Chicago. The last two years he was feeble physically but mentally as keen and alert as ever. He arose every day until the last, sitting in the room that had so long been his study, library and herbarium.

Three species of plants bear his name, Potamogeton Hillii, Crataegus Hillii and Carduus Hillii.

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Bureau of Plant Industry, Washington, D. C.

THE VARIATIONS OF POLYGONUM PENSYLVANICUM.

M. L. Fernald.

The common plant which is passing as *Polygonum pensylvanicum*[1] L. through the eastern half of the United States is an upright plant, often very tall, with the lanceolate to lance-ovate acuminate leaves usually quite glabrous upon both surfaces or sometimes with a mere trace of strigose pubescence upon the midrib beneath. The plant is so definitely glabrous, not only on the stem but on the foliage (the only pubescence being the pronounced glandularity of the peduncles), that it is often characterized in our American manuals as having the foliage glabrous beneath.

This plant with strictly or essentially glabrous foliage occurs generally from New Brunswick to South Dakota and Colorado and southward to the Gulf States, very often with the habit of a weed. Along the Atlantic seaboard, however, from eastern Massachusetts to South Carolina and presumably southward, as well as on the coastal plain of the Gulf of Mexico and inland through the Mississippi basin to southwestern Ontario, much of the plant with the characteristic bright-pink large flowers and the glandular peduncles of *Polygonum pensylvanicum* has the leaves very definitely strigose beneath and sometimes above, and frequently the upper ocreae are bristly-ciliate, thus departing conspicuously from the glabrous extreme which is more generally known as *Polygonum pensylvanicum;* and often, but by no means always, the leaves of the coastal plain plant are narrower than in the more widely dispersed glabrous-leaved plant. On the islands of southern New England, Nantucket and Block Island, another plant with the large achenes, rose-colored flowers and glandular peduncles of *Polygonum pensylvanicum,* differs very markedly from the commoner tendencies of the species in its habit, foliage and nearly suppressed peduncles. This extreme plant, which is said by

[1] The specific name *pensylvanicum* was consistently so written by Linnaeus and by his contemporaries, but in most modern works it has been made to agree with modern geographic usage and written "*pennsylvanicum,*" apparently under the impression that an orthographic error is thus being corrected. Maps of the 18th century generally show the spelling *Pensylvania* so that it appears that Linnaeus, Lamarck and others who wrote the specific name with a single *n* in the first syllable were not committing an orthographic error but were following the authorized spelling of their day.

Mr. Bicknell to be the prevailing form on Nantucket, where, as on Block Island, it is characteristic of sandy pond-shores near the sea, has been beautifully described by Mr. Bicknell, who, apparently from his disinclination to recognize varieties, left the plant without a distinguishing name. Mr. Bicknell's description is so accurate and so clearly applies to the plant of Block Island as well as of Nantucket that it is here quoted:

"PERSICARIA PENNSYLVANICA (L.) Small. The common erect form of this plant with lanceolate tapering leaves and cylindric spikes of rather pale pink ovoid-oblong flowers is uncommon on Nantucket and was met with only twice — at Wauwinet and in Quaise. The prevailing form is mostly prostrate or ascending and is confined almost exclusively to the sandy shores of ponds near the ocean on the south and east sides of the island. In its extreme development it is notably different from the erect narrow-spiked form but appears to be a state of the latter, rather than an intrinsically diverse plant. By comparison it is characterized by short-oblong or even subglobose more densely flowered spikes, usually of a bright rose-color or carmine-red, although sometimes pale, the flowers shorter and almost orbicular in outline, the achenes rather larger, thicker, and more broadly orbicular, often more abruptly narrowed to a rather shorter style; the leaves are often marked above by a dark chevron and are commonly shorter, broader and less attenuate to a blunt or rounded apex and on shorter petioles, the upper most often sessile. The plant is often firmly prostrate and is sometimes very small, stems bearing mature spikes being sometimes only 1 dm. long." [1]

So far as the writer is able to determine this characteristic plant is known only from the two outer islands, Nantucket and Block Island, although it is naturally to be expected on the shores of Martha's Vineyard, the Buzzard's Bay region and Long Island. In its distribution it is coincident with many other extreme variations and localized species, and it seems to the writer well worthy varietal recognition.

We have, then, in eastern North America three well pronounced geographic variations passing as *Polygonum pensylvanicum* and the question naturally arises as to which was the plant of Linnaeus. In this particular case happily Linnaeus left no question, for he well describes the coastal plain plant with strigose or scabrous lower leaf-surfaces as having "Folia *lanceolata, acuminata, subtus ad modum scabra.*" [2]

These notes, which were originally based upon the material in the

[1] Bicknell, Bull. Torr. Bot. Club, xxxvi. 452 (1909).
[2] L. Sp. Pl. i. 362 (1753).

Gray Herbarium and the herbarium of the New England Botanical Club, have been augmented by an examination of the collections of the Academy of Natural Sciences of Philadelphia generously loaned for examination. In this collection, as it was learned by correspondence with Mr. Bayard Long, the strigose-leaved coastwise plant had already been discriminated, Mr. Long's letter of February 14, 1917, making the pertinent statement: "For several years we have had separated out a New Jersey thing with rough, generally narrow leaves and different-sized fruit, which I had been unable to place. *Most* of it is from Cape May along the edges of the salt marshes, but not always: while the broad-leaved, smooth-leaved common plant invariably looks like a weed or an introduction in our area." And on one of the field-labels of Mr. O. H. Brown, whose abundant collections from the Cape May Peninsula in the Herbarium of the Philadelphia Academy beautifully display typical *P. pensylvanicum*, Mr. Brown made the discriminating note: "This seems quite common near the town, and seems quite distinct from the *P. pennsylvanicum* of the fields."

The points above discussed may be summarized by the following synopsis:

A. Leaves copiously strigose beneath and often above: uppermost ocreae eciliate or frequently bristly-ciliate: achenes 2.2–2.8 mm. broad.

Polygonum pensylvanicum L., var. **genuinum**. *P. pensylvanicum* L. Sp. Pl. i. 362 (1753), originally described with "Folia *lanceolata, acuminata, subtus ad modum scabra.*" — Coastal region from Massachusetts to Mississippi, northward through the Mississippi basin to southern Ontario. The following specimens are characteristic. Massachusetts: Mill Dam, Brighton, August 19, 1853, *Wm. Boott;* North Scituate, September 1, 1897, *Sydney Harris;* Marshfield, September 10, 1898, *C. H. Morss;* Pocasset, Bourne, August 11, 1914, *F. S. Collins,* no. 2906; Hyannis, September 9, 1874, *Wm. Boott;* near Swan Pond, South Yarmouth, September 8, 1907, *E. W. Sinnott;* Yarmouth, September 3, 1910, *F. S. Collins,* no. 758; meadow, Eastham, September 11, 1909, *F. S. Collins,* no. 758; Chilmark, Martha's Vineyard, August 27, 1895, *Sydney Harris;* shore of Tashmoo Lake, Tisbury, Martha's Vineyard, July 30, 1911, *J. A. Cushman;* Nantucket, August 18, 1878, *E. & C. E. Faxon.* Rhode Island: damp border of Reservoir, Newport, September 21, 1901, *W. P. Rich;* dense wet thickets at borders of sphagnous swamps southwest of Harbor Pond, Block Island, August 19, 1913, *Fernald & Long,* no. 9409. New Jersey: Seaside Park, Ocean Co., August 30, 1908, *E. B. Bartram;* Delanco, August 23, 1910, *C. S. Williamson;* Mickleton, August 10, 1893, *Benjamin Heritage;* Avalon, September 7 and 8,

1895, *Ida A. Keller;* swamp, Cold Spring, August 22, 1915, *O. H. Brown,* no. 188 (white-flowered); wet ground east of Briar Island, Cold Spring, September 10, 1911, *O. H. Brown;* dry water hole, Cape May, September 10, 1911, *O. H. Brown;* low ground along marsh, Cape May, September 14, 1911, *O. H. Brown;* waste places in low grounds, Cape May, September 24, 1912, *O. H. Brown;* Race Course Pond, West Cape May, September 6, 1911, *O. H. Brown.* PENNSYLVANIA: Tinicum, Delaware Co., September 23, 1899, *B. H. Smith.* DELAWARE: Ruthby, September 12, 1893, *A. Commons.* VIRGINIA: Norfolk, September 6, 1893, *A. A. Heller,* no. 1241. SOUTH CAROLINA: Santee Canal, *Ravenel.* MISSISSIPPI: Saratoga, October 2, 1903, *Tracy,* no. 8768. MISSOURI: St. Louis, September, 1848, *Geo. Engelmann;* Meremac Highlands, St. Louis Co., October 30, 1910, *E. B. Bartram;* common along Swan, Swan, October 1, 1899, *Bush,* no. 705. ONTARIO: marsh at Arnes, near Kingsville, August 9, 1901, *J. Macoun,* Herb. Geol. Surv. Can. no. 54,758.

A. Leaves glabrous or at most sparsely strigose on the midrib beneath: ocreae usually all eciliate: achenes mostly 2.5–3.5 mm. broad. *B.*

B. Stems erect or strongly ascending: leaves lanceolate, acuminate: spikes cylindric, long-peduncled: flowers ovoid-oblong.

Var. **laevigatum**, n. var., a forma typica recedit foliis subtus glabris. — The very common form of the species, occurring from New Brunswick to South Dakota, Colorado, and southward. TYPE: Rumford, Rhode Island, July 6, 1903, *E. F. Williams,* in Gray Herb.

B. Stems depressed or subascending: leaves elliptic to oval, not acuminate, obtuse or rounded at apex: spikes short-ellipsoid to subglobose, short-peduncled to sessile: flowers suborbicular.

Var. **nesophilum**, n. var., depressum vel subadscendens, ramis 1–2.5 dm. longis; foliis glabris ellipticis vel ovalibus nec acuminatis apice obtusis vel rotundatis crassis 3–5 cm. longis breviter petiolatis vel subsessilibus; spicis breviter ellipsoideis vel subglobosis 0.5–1.8 cm. longis breviter pedunculatis vel sessilibus; floribus suborbicularibus roseis.— Sandy pond-shores near the sea, Nantucket Island, Massachusetts, and Block Island, Rhode Island. MASSACHUSETTS: described by Bicknell as the prevailing form on Nantucket.— Bull. Torr. Bot. Club, xxxvi. 452 (1909). RHODE ISLAND: sandy border of a pond close to the ocean, northern end of Block Island, September 28, 1916, *J. F. Collins, Perley Spaulding and G. F. Gravatt* (TYPE in Gray Herb.).

GRAY HERBARIUM.

SIEGESBECKIA ORIENTALIS IN ILLINOIS.

Earl E. Sherff.

Prior to his death in 1882, Elihu Hall had gradually built up a large private herbarium, consisting of specimens from many parts of the world. A good portion of these were collected by himself in the western United States and determined by Asa Gray.[1]

It was Mr. Hall's custom to take seeds from various specimens collected by himself or obtained through exchange and to plant these upon his large estate near Athens, Illinois. This was done for several hundred species. After his death, no special effort was made to preserve any of these introduced species that might have been left, and what proportion of these have survived until the present day is a question naturally of interest.

In August, 1916, upon the recommendation of Dr. C. F. Millspaugh of the Field Museum, Mr. O. E. Lansing, Jr. and myself were commissioned by the Field Museum to visit Athens, Illinois, and make a thorough reconnaissance of the flora in the immediate vicinity of the Hall estate. Our instructions were, not only to obtain a representative collection of plants from that vicinity but to look with particular care for all exotic species that might have survived from the days of Elihu Hall's activities.

On reaching Athens, August 25th, we were entertained at the Hall estate by Mr. Julian Hall and family and were shown the utmost courtesy and kindness in the prosecution of our work. Immediately upon our arrival, we had our attention drawn to a large, coarse composite that was very common along the pathway from the dooryard to the barnyard and near certain fences. Aside from this species, which later was determined by Dr. B. L. Robinson as *Siegesbeckia orientalis* L., no trace could be found of the many introductions that had been made years before.[2] Reference to the collections in the Field Museum Herbarium showed a specimen of precisely the same species, from the Bebb Herbarium. This plant had been collected by Elihu Hall, August 24, 1867, from among his plants under cultivation, and

[1] Concerning Elihu Hall's life and travels, see Bot. Gaz. VII. 126 (1882), *ibid.* IX. 59 (1884). Concerning his herbarium, see Bot. Gaz. LXII. 239 (1916).

[2] Except certain trees and perennial herbs, such as violets, that had been set out about the yard and had received some degree of protection.

likewise had been determined as *Siegesbeckia orientalis* L. Here, then, was a foreign (Asiatic) species that had persisted for from thirty-five years (i. e., since Elihu Hall's death) to nearly fifty years. But what to us seems far more worthy of record is the fact that none of the other introduced species were found to have maintained independently a foothold.

While the manuals do not list *Siegesbeckia orientalis* for the United States, Dr. Robinson states, in a letter accompanying his determination, that it has been found a few times before in America; that a form of it even was found "some years ago in a hilly bit of dump land within a quarter of a mile of the Gray Herbarium" at Cambridge, Massachusetts.

CHICAGO, ILLINOIS.

THE STATUS OF GLYCERIA FERNALDII.

HAROLD ST. JOHN.

A DETAILED examination of a large amount of material has convinced the writer that *Glyceria pallida* (Torr.) Trin., var. *Fernaldii* Hitchc. has abundant and stable characters. It also departs from the species with which it has been associated in having a later flowering season and a different range. These matters are stated below in tabular form and should convince the reader, as they have the writer, that the plant should be considered as a species.

G. PALLIDA (Torr.) Trin.	G. FERNALDII (Hitchc.).
Grain 1.5 mm. long	Grain 0.8 mm. long.
Anther cylindrical, 1 mm. long.	Anther globose, 0.2–0.5 mm. long.
Spikelets usually 4–7-flowered, 6–7 mm. long.	Spikelets usually 3–5-flowered, 4–5 mm. long.
Branches of panicle flexuous, ascending or somewhat divergent.	Lower branches of panicle strongly divergent or reflexed at maturity.
Leaves 5–20 cm. long, 2–8 mm. wide; lower sheaths usually divergent and free at summit.	Leaves 4–10 cm. long, 2–3 mm. wide; sheaths and ligules tightly clasping the stem.
Culm 3–10 dm. high.	Culm 2–4 dm. high.
Flowering in May and June.	Flowering in July and August.
Range from So. Me. to Va., and west to So. Ont., Mich. and Miss.	Range from Nfd. to Conn., and west to Minn.

Glyceria **Fernaldii** (Hitchc.), n. comb. *G. pallida* (Torr.) Trin., var. *Fernaldii* Hitchc., Rhodora, viii. 211 (1906).

The second glume of *G. Fernaldii* is 1–2 mm. in length, thus resembling that of *G. nervata* (Willd.) Trin., but the latter species has, as well as other characters, long cylindrical anthers.

Gray Herbarium.

TWO NEW MARITIME PLANTS OF NORTHEASTERN NORTH AMERICA.

M. L. Fernald.

Bidens Eatoni, var. **kennebecensis**, n. var., achaeniis exterioribus 8.8–9.8 mm. longis, interioribus 9.5–10.5 mm. longis.

Outer achenes 8.8–9.8 mm. long, the inner 9.5–10.5 mm. long.— Maine, tidal reaches of the lower Kennebec system: tidal mud-flats and swales by Cathance River, Bowdoinham, September 14 and 19, 1916, *Fernald & Long*, nos. 14,822 (type in Gray Herb.), 14,823, also in *Plantae Exsiccatae Grayanae*, no. 297; border of salt-marsh, Back River Creek, Woolwich, September 15, 1916, *Fernald & Long*, no. 14,824.

Exactly resembles *B. Eatoni* Fernald of the tidal flats of the lower Merrimac, but the Maine material of which several hundred individuals were collected has the achenes of the well developed heads consistently longer than in the plant of the lower Merrimac; the outer achenes of the latter being 6–7, the inner 7–9 mm. long.

Hudsonia ericoides L., forma **leucantha**, n. f., petalis albescentibus.

Petals whitish.— Prince Edward Island: sand hills near the sea, Bothwell, July 6, 1914, *Fernald & St. John* in *Plantae Exsiccatae Grayanae*, no. 241 (type in Gray Herb.).

Gray Herbarium.

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